

Appl. No.: 10/748,980
Amdt. dated April 30, 2007
Reply to Official Action of January 10, 2007

Amendments to the Claims:

1. (Currently Amended) A system comprising:

a terminal ~~capable of communicating~~ configured to communicate at least one of within and ~~or~~ across at least one network, wherein the terminal is included within an organization including a plurality of terminals, each terminal being at at least one of a plurality of logical positions within the organization;

a primary certification authority (CA) ~~capable of providing~~ configured to provide an identity certificate to the terminal, wherein the primary CA is ~~capable of issuing~~ configured to issue an identity certificate to each terminal of the organization;

a secondary CA ~~capable of providing~~ configured to provide at least one role certificate to the terminal based upon the at least one logical position of the terminal within the organization, wherein the organization includes a plurality of secondary CA's ~~capable of issuing~~ configured to issue at least one role certificate to respective groups of terminals of the organization based upon the at least one logical position of each of the respective terminals within the organization; and

a server ~~capable of authenticating~~ configured to authenticate the terminal based upon the identity certificate and the at least one role certificate of the terminal to thereby determine whether to grant the terminal access to at least one resource of the server.

2. (Currently Amended) A system according to Claim 1, wherein the terminal comprises a terminal included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at one of a plurality of logical positions comprising a plurality of service plans offered by the cellular network operator.

3. (Currently Amended) A system according to Claim 1, wherein the terminal comprises a terminal included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at at least one of a plurality of logical positions comprising a plurality of services offered by the cellular network operator.

4. (Currently Amended) A system according to Claim 1, wherein the secondary CA is ~~capable of providing~~ configured to provide at least one role certificate each having an associated validity time no greater than a validity time of the identity certificate provided by the primary CA.

5. (Currently Amended) A system according to Claim 4, wherein the server is capable of authenticating configured to authenticate the terminal based upon the validity times of the identity certificate and at least one role certificate of the respective terminal.

6. (Currently Amended) A system according to Claim 1, wherein the terminal is capable of requesting configured to request access to at least one resource of a server before the server authenticates the terminal, and wherein the server is capable of granting configured to grant access to the at least one resource if the terminal is authenticated.

7. (Currently Amended) A method of authenticating a terminal comprising:

providing a terminal capable of communicating configured to communicate at least one of within and or across at least one network, wherein the terminal is included within an organization including a plurality of terminals, each terminal being at at least one of a plurality of logical positions within the organization;

providing an identity certificate to the terminal from a primary certification authority (CA), wherein the primary CA is capable of issuing configured to issue an identity certificate to each terminal of the organization;

providing at least one role certificate to the terminal from a secondary CA based upon the at least one logical position of the terminal within the organization, wherein the organization includes a plurality of secondary CA's capable of issuing configured to issue at least one role certificate to respective groups of terminals of the organization based upon the at least one logical position of each of the respective terminals within the organization; and

authenticating the terminal at a server based upon the identity certificate and the at least one role certificate of the terminal to thereby determine whether to grant the terminal access to at least one resource of the server.

8. (Currently Amended) A method according to Claim 7, wherein providing a terminal comprises providing a terminal included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at one of a plurality of logical positions comprising a plurality of service plans offered by the cellular network operator.

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9. (Currently Amended) A method according to Claim 7, wherein providing a terminal comprises providing a terminal included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at least one of a plurality of logical positions comprising a plurality of services offered by the cellular network operator.

10. (Original) A method according to Claim 7, wherein providing at least one role certificate comprises providing at least one role certificate each having an associated validity time no greater than a validity time of the identity certificate.

11. (Original) A method according to Claim 10, wherein authenticating the terminal comprises authenticating the terminal based upon the validity times of the identity certificate and at least one role certificate of the respective terminal.

12. (Original) A method according to Claim 7 further comprising:
requesting, from the terminal, access to at least one resource of a server before authenticating the terminal; and
granting access to the at least one resource if the terminal is authenticated.

13. (Currently Amended) A terminal included within an organization including a plurality of terminals, each terminal being at least one of a plurality of logical positions within the organization, the terminal comprising:

a controller ~~capable of communicating~~ configured to communicate at least one of within and/or across at least one network, wherein the controller is ~~capable of obtaining~~ configured to obtain an identity certificate from a primary certification authority (CA) ~~capable of issuing~~ configured to issue an identity certificate to each terminal of the organization, wherein the controller is also ~~capable of obtaining~~ configured to obtain at least one role certificate from a secondary CA based upon the at least one logical position of the terminal within the organization, wherein the organization includes a plurality of secondary CA's ~~capable of issuing~~ configured to issue at least one role certificate to respective groups of terminals of the organization based upon the at least one logical position of each of the respective terminals within the organization; and

a memory ~~capable of storing~~ configured to store the identity certificate and at least one role

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certificate,

wherein the controller is also capable of communicating configured to communicate with a server such that the server is capable of authenticating configured to authenticate the terminal based upon the identity certificate and the at least one role certificate of the terminal to thereby determine whether to grant the terminal access to at least one resource of the server.

14. (Currently Amended) A terminal according to Claim 13, wherein the controller is capable of obtaining configured to obtain an identity certificate from a primary CA capable of issuing configured to issue an identity certificate to each terminal of the organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at one of a plurality of logical positions comprising a plurality of service plans offered by the cellular network operator.

15. (Currently Amended) A terminal according to Claim 13, wherein the controller is capable of obtaining configured to obtain an identity certificate from a primary CA capable of issuing configured to issue an identity certificate to each terminal of the organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at least one of a plurality of logical positions comprising a plurality of services offered by the cellular network operator.

16. (Currently Amended) A terminal according to Claim 13, wherein the controller is capable of obtaining configured to obtain at least one role certificate each having an associated validity time no greater than a validity time of the identity certificate obtained by the controller.

17. (Currently Amended) A terminal according to Claim 16, wherein the controller is also capable of communicating configured to communicate with a server such that the server is capable of authenticating configured to authenticate the terminal based upon the validity times of the identity certificate and at least one role certificate of the respective terminal.

18. (Currently Amended) A terminal according to Claim 13, wherein the controller is capable of requesting configured to request access to at least one resource of a server before the server authenticates the terminal such that the server is capable of granting configured to grant access to the at

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least one resource if the terminal is authenticated.

19. (New) A method of authenticating a terminal comprising:

receiving an identity certificate at a terminal configured to communicate at least one of within or across at least one network, wherein the terminal is included within an organization including a plurality of terminals, each terminal being at at least one of a plurality of logical positions within the organization, and wherein the identity certificate is received from a primary certification authority (CA) configured to issue an identity certificate to each terminal of the organization;

receiving at least one role certificate at the terminal from a secondary CA based upon the at least one logical position of the terminal within the organization, wherein the organization includes a plurality of secondary CA's configured to issue at least one role certificate to respective groups of terminals of the organization based upon the at least one logical position of each of the respective terminals within the organization; and

sending a request from the terminal to a server, the request including the identity certificate and the at least one role certificate of the terminal to enable the server to thereby determine whether to grant the terminal access to at least one resource of the server based thereon.

20. (New) A method according to Claim 19, wherein the terminal is included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at one of a plurality of logical positions comprising a plurality of service plans offered by the cellular network operator.

21. (New) A method according to Claim 19, wherein the terminal is included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at at least one of a plurality of logical positions comprising a plurality of services offered by the cellular network operator.

22. (New) A method according to Claim 19, wherein providing at least one role certificate comprises providing at least one role certificate each having an associated validity time no greater than a validity time of the identity certificate.

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23. (New) A server comprising:

a processor configured to receive a request from a terminal configured to communicate at least one of within or across at least one network, wherein the terminal is included within an organization including a plurality of terminals, each terminal being at at least one of a plurality of logical positions within the organization, wherein the request includes an identity certificate and at least one role certificate, the terminal having received the identity certificate from a primary certification authority (CA) configured to issue an identity certificate to each terminal of the organization, and having received the at least one role certificate from a secondary CA based upon the at least one logical position of the terminal within the organization, the organization including a plurality of secondary CA's configured to issue at least one role certificate to respective groups of terminals of the organization based upon the at least one logical position of each of the respective terminals within the organization,

wherein, in response to the request, the processor is configured to determine whether to grant the terminal access to at least one resource of the server based on the identity certificate and the at least one role certificate, and

wherein the processor is configured to grant access to the at least one resource if the terminal is authenticated.

24. (New) A server according to Claim 23, wherein the terminal is included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at one of a plurality of logical positions comprising a plurality of service plans offered by the cellular network operator.

25. (New) A server according to Claim 23, wherein the terminal is included within an organization comprising a customer base of a cellular service provider that includes a plurality of terminals, each terminal being at at least one of a plurality of logical positions comprising a plurality of services offered by the cellular network operator.

26. (New) A server according to Claim 23, wherein each of the at least one role certificate has an associated validity time no greater than a validity time of the identity certificate.